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EP052506NC003-TDS

COCOON PA-Birch(GF)

It is a PA12-based reinforced material with high rigidity and toughness, excellent creep resistance, and low water absorption. Parts printed using this material have high strength, abrasion resistance, low warping, low moisture absorption, outstanding toughness and fatigue resistance, etc. It can maintain effective mechanical properties and dimensional stability when used in long-term working environments. It can be widely used in mechanical engineering, electronics and electrical appliances, automobile manufacturing, aerospace, and other fields.

Part 1 Injection-Molded Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Physical Properties				
Density	23°C	GB/T 1033	g/cm3	1.2
Melt Volume Rate	230°C,2.16kg	GB/T 3682	g/10min	2.5
Mechanical Properties				
Tensile Strength	50mm/min	GB/T 1040.2	MPa	100
Elongation @ Break	50mm/min	GB/T 1040.2	%	4.5
Flexural Strength	2mm/min	GB/T 9341	MPa	145
Flexural Modulus	2mm/min	GB/T 9341	MPa	4300
Izod Impact Strength	1J	GB/T 1843	kJ/m2	10
Thermal Property				
HDT	1.8MPa	GB/T 1634	°C	105

Note: The typical physical properties are not intended for use as sales specifications.

Part 2 Printed Specimen Performance

Testing Items	Testing Conditions	Testing Methods	Units	Typical Values
Mechanical Properties				
Tensile Strength(X-Y)	50mm/min	GB/T 1040.2	MPa	63
Tensile Strength(Z)	50mm/min	GB/T 1040.2	MPa	29
Flexural Strength	2mm/min	GB/T 9341	MPa	67
Impact Strength, Notched	2.75J	GB/T 1843	kJ/m2	25

Note: All specimens are printed under the following conditions: nozzle temperature = 290°C, printing speed = 60 mm/s, build plate temperature=90°C infill = 100%, nozzle diameter = 0.4mm.

Printing Path Direction of Specimen (Z)

Printing Path Direction of Specimen (X-Y)

Part 3 Printing Guidelines

Parameters	Settings
Nozzle Temperature	280-300°C
Build Plate Temp.	80-100°C
Build Plate Material	Glass、PEI、Steel Spring Build Plate
Bottom Layer Printing Temp.	280-300°C
Enclosed-chamber Printing	yes
Print Speed	40-70mm/s
Drying recommendations	100-120°C in a hot air dryer for 6-8hours

Disclaimer:

The values provided in this data sheet are for reference and comparison purposes only. They should not be used for design specifications or quality control. Actual values may vary depending on printing conditions. The ultimate performance of printed parts depends not only on the material but also on the part design, environmental conditions, and printing conditions. The product specifications are subject to change without notice.

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